March 12, 2003

Needed: A Common-Sense Approach to Protecting Our Nation's Forests

Executive Summary

- **More than 190 million acres of federal forest land are in declining health due to overgrowth, disease, insect infestation, and weather-related damage and, as a result, also are susceptible to catastrophic wildfires.** The Nation's forests are among our most treasured natural resources. The health of those forests is a safety issue for millions of Americans who live in or near them, but more than that, it is essential to assuring a diverse ecosystem of plants and animals that can survive for generations to come.[1]

- **The tools are readily available to restore our forests to healthy conditions.** Improving forest health through thinning smaller trees, reduction of overgrowth, removal of dead and dying trees, and prescribed burning to further reduce unwanted fuels can help return our forests to "pre-settlement conditions." This will assure that: a diverse ecosystem of plants and animals will survive for generations to come; air and water quality are improved; recreation opportunities and scenic beauty are preserved and enhanced; and that the threat of catastrophic wildfires is reduced.[2]

- **Obstacles – in the form of environmental extremists – are impeding timely treatment of our forests.** Administrative appeal of restoration projects and litigation to prevent federal forest managers from conducting forest health projects have drastically slowed the effort to restore forest health. Policymakers and lawmakers should concentrate on removing administrative and legal impediments to forest health restoration efforts.

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[1]USDA/Department of Interior Notice of Proposed Rulemaking, December 16, 2002, Federal Register, 77038-77044.

[2]Dr. Wallace Covington, House Committee on Resources, Subcommittee on Forests and Forest Health Subcommittee testimony, August 14, 2002.

Neglect and Overgrowth Harm Forest Health

The nation's forests are among our most treasured resources, yet their future is at risk. Policymakers must act to restore forest health to the more than 190 million acres of federal forest and rangelands across the nation that are overgrown or damaged by insect infestation, disease or weather events, and to reduce the risk of catastrophic wildfire. Forest health is a safety issue for millions of Americans who live in or near forests, but more than that, it is essential to assuring that a diverse ecosystem of plants and animals will survive for generations to come, that air and water quality are protected, and that recreation opportunities and scenic beauty are preserved and enhanced.

In an April 1999 report to Congress, the General Accounting Office found that the most extensive and serious problem related to the health of national forests in the interior West is the over-accumulation of vegetation which can strangle larger trees by reducing available moisture, nutrients, and sunlight.[3] The GAO found that past management practices, especially the U.S. Forest Service's historic policy of putting out wildfires, disrupted the occurrence of frequent low-intensity fires, which periodically removed undergrowth without significantly damaging larger trees. The sad state of our forests is also due in part to a lack of active forest management efforts to reduce undergrowth and remove dead and dying trees to restore forest health.

Despite the widespread understanding that our forests are at risk, some environmental groups literally have formed human roadblocks to stop efforts by federal land managers to restore forest health. Appeals and lawsuits filed by environmental groups for projects throughout the nation, large and small, now represent the greatest risk to federal forests.

The Tools to Improve Forest Health Are Known and Available

Assuring forest health requires legislative and administrative changes that assure good stewardship of forests through thinning the forests (primarily thinning smaller trees) and utilizing prescribed (controlled) burning where appropriate.

Returning the Forests to "Pre-settlement" Conditions

Dr. Wallace Covington, Director of the Ecological Restoration Institute at Northern Arizona University and considered by many to be the leader in the science of forest restoration, agrees that severe overgrowth is the principal problem facing many forests. When smaller (noncatastrophic) fires periodically occur, they clear forests of dead and dying wood, kill insects, promote tree reproduction, and burn some of the smaller trees, thereby affording larger trees the opportunity to grow still larger. These smaller fires enhance the opportunity for growth of grasses and native plants and restoration of meadows. This returns forests to their "pre-settlement" conditions.

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[3]GAO/RCED-99-65, "Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats."

Research underway by Dr. Covington at a forest-restoration site near Flagstaff, Arizona is addressing the problem of declining forest health caused by the historic lack of natural fires due to fire-suppression efforts over the past several decades. Dr. Covington's research demonstrates the benefit of new techniques to restore the health of Arizona's ponderosa pine forests. Through site-specific thinning of small trees and underbrush, forest health is enhanced and the likelihood of fire is diminished – and reduced in intensity if fire does occur. Techniques employed include opening the forest floor through the removal of small, dead, and disease-prone trees, thus creating an environment more conducive to plant and grass growth and increasing the availability of moisture, nutrients, and sunlight to larger trees. In testimony before a U.S. House committee last year, Dr. Covington explained the value of manual thinning of forest material followed by prescribed burning:

> "Research across the Intermountain West has shown that restoration treatments substantially reduce fire hazard by thinning trees to decrease tree canopy density, break up interconnected canopy fuels, raise the crown base height, and then reduce accumulated forest floor fuels and debris with prescribed fire. Fire alone is usually inadequate. Without thinning, fire can lead to increased mortality, especially among old growth trees."[4]

Dr. Thomas Swetnam, of the Laboratory of Tree-Ring Research at the University of Arizona, echoes Covington's support for reducing the overgrowth in our forests:

> "Thinning of small-diameter trees is urgently needed in many forests of the western United States to reduce fire hazards and to restore more natural forest conditions. . . . Prescribed burning should be used wherever it is safe and practical to treat accumulated fuels and the new fuels generated by thinning, to maintain open stands, and to reintroduce and maintain key ecological processes, such as nutrient cycling."[5]

Dr. Covington also argues that unless we begin now to address the problem of overgrowth in our forests, the nation faces drastic declines in forest health and the attendant loss of wildlife habitat, watershed values, and recreation opportunities:

> "We are at a fork in the road. Down one fork lies burned out, desperate landscapes – landscapes that are a liability for future generations. Down the other fork lies healthy, diverse, sustaining landscapes – landscapes that will bring multiple benefits for generations to come. Inaction is taking, and will continue to take, us down the path to unhealthy landscapes, costly to manage. Scientifically-based forest restoration treatments,

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[4]Dr. Wallace Covington, House Committee on Resources testimony, August 14, 2002.

[5]Dr. Thomas W. Swetnam, University of Arizona, House Subcommittee on Forest Health testimony, August 14, 2000.

including thinning and prescribed burning, will set us on the path to healthy landscapes, landscapes like the early settlers and explorers saw in the late 1800s."[6]

Finally, Dr. Covington advocates avoidance of a "one-size fits all approach" and instead supports management approaches that consider each location and its pre-settlement condition, as well as its relationship to the broader ecosystem and the communities that live within it. (For example, thinning and burning may not be suitable in lodgepole pine forests.) Restoration should be an adaptive process for restoring and enhancing ecosystem health that will result in the carrying capacity of the land returning to its pre-settlement condition.[7]

Enhancing Plant, Fish and Animal Habitats and Increasing Diversity

Some observers, claiming to speak in the name of "environmental protection," advocate limiting the use of thinning to the so-called Wildland-Urban Interface, where developed communities abut federal forest lands. Dr. Covington suggests that concentrating on those regions alone – while useful in protecting homes, farms, ranches, and people – does little to address the health threat to entire forest ecosystem, including the habitats of birds, fish, and other animals. Left untreated, the vast interior of our valuable forests will not be a welcoming place for some of nature's diverse species:

> "Another reason that attention cannot be narrowly focused on a ring around the city is because it will fail to address one of the most contentious issues of our time, the protection of endangered species. . . . By not restoring the forest, we contribute to the decline of habitat and the collision between society and nature." [8]

On the other side of this coin is a critical benefit yielded by forest thinning: a dramatic increase in species diversity. According to Secretary of the Interior Gail Norton, catastrophic fires in overly dense forests pose a threat to many threatened and endangered species, and removal of small trees and undergrowth will benefit ecosystem health: she notes that the U.S. Fish and Wildlife Service estimates that 46 species of forest birds, including 13 species of great concern to wildlife biologists, will benefit from better management of the forests.[9]

Researchers from the U.S. Geological Survey and Oregon State University also suggest that thinning young forests can benefit the diversity of plants and animals. Their research findings hold special significance for the management of young forests – with trees about 40-60

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[6]Dr. Wallace Covington, testimony before the House Subcommittee on Forests, Field Hearing to Discuss Interagency Cooperation in Wildland Firefighting, Show Low, AZ, September 28, 2002.

[7]"Helping Western Forests Heal." *Nature*, Vol. 408, 9 November 2000, pp. 135-136.

[8]Dr. Wallace Covington, August 14, 2000.

[9]Gail Norton, op-ed, *Washington Post*, September 17, 2002.

years old – that cover large areas of the Pacific Northwest. The study addresses millions of acres of old-growth forests in the Pacific Northwest that were clear-cut in years past and then densely replanted with uniformly spaced seedlings with the goal of producing high yields of timber and associated wood products. Then the 1994 Northwest Forest Plan shifted the management goal for these forests to emphasize conservation and habitat for plants and animals typically associated with older forests. While the researchers believed that the dense young forests would eventually grow to resemble the old-growth forests they replaced, their research indicates that this may not occur unless the young forests are selectively thinned to allow remaining trees to grow under less dense conditions.[10]

The tracts examined by the researchers were thinned some two decades ago. Among other findings, the researchers observed that widely spaced trees have larger crowns and diameters than closely spaced trees of the same species. They also found that thinning young dense stands of trees increased the diversity and abundance of some lichens important as wildlife forage, and that the abundance of forest songbirds was greater than in unthinned forests.

By the same token, an unhealthy forest is an invitation to habitat destruction. The Chedeski fire in Arizona burned through 20 Mexican Spotted Owl Protected Active Centers, destroyed 25 Northern Goshawk areas, and killed 46 elk, 2 bears, and a bear cub.[11]

Restoring Forest Health Protects Air and Water Quality

Healthy forests collect snow and rain, providing healthy habitats for fish and other animals, as well as providing water for human use. The unhealthy, overgrown forest uses far more water to support plant life, so less water can move into streams and aquifers. The forest that has been badly burned cannot provide a natural filter to assure pure sources of water because it allows rain and melting snow to run off more rapidly – often much more rapidly. This causes flooding and soil erosion and thereby denies water to recharge groundwater aquifers, damages the streams, rivers, and lakes that provide refuge to fish and other animals, and potentially harms public water storage facilities.

The city of Denver presents a compelling example of the enormity of damage imposed on water facilities as a result of unhealthy forests: in 1996, a wildfire burned almost 12,000 acres of the Pike National Forest in Colorado, and two months later, a large thunderstorm dropped about 2.5 inches of rain on the fire area, causing severe flooding, which in turn deposited some 200,000 cubic yards of debris into Strontia Springs Reservoir, a major component of the city of Denver's public water system. The debris shut down a major water treatment plant and cost Denver more than $1 million in plant cleanup alone. In the five years following the fire, the city

[10]The findings of this extensive body of work are summarized in a press release issued by the University of Oregon on November 11, 2002.

[11]Rodeo-Chedeski Final BAER Report, Apache Sitgreaves National Forest, July 29, 2002.

spent several million dollars to remove the debris from the reservoir. City officials estimate that expenditures will total $10 million to $20 million for cleanup until the burned area recovers.[12]

Healthy forests also contribute to clean air. Healthy stands of large trees absorb carbon dioxide and "exhale" large amounts of pure oxygen. But if large trees are crowded out by smaller trees and low-lying vegetation, they will contribute less to higher levels of air quality. Further, if those unhealthy forests burn, they contribute to air pollution, sending tons of soot, carbon monoxide, volatile organic compounds, and nitrogen oxides into the air.[13] For example, NASA scientists suggested to the Forest Service that the amount of air pollution released in one day by last year's Rodeo-Chedeski fire in Arizona equaled the amount released by all of the cars and trucks in the United States in a single week.

Preserving Scenic Beauty and Providing Recreation Opportunities

Recreation activities abound on our nation's public lands. More than 400 million acres of National Forests, National Parks, and other federal lands are available for a wide range of activities, including camping, hiking, fishing, and wildlife observation. The scenic beauty of these areas is varied and often stunning. The health of forested lands is essential to the forest experience millions of Americans take advantage of every year. The U.S. Forest Service hosted about 215 million visitors during the one-year period of 2000-2001.[14]

Unhealthy, overgrown forests can limit recreation opportunities: they limit hikers, campers and fishermen; they limit wildlife observation opportunities; and, as previously noted, they restrict the kinds and numbers of wildlife species available for observation. Dead and dying trees and forests choked with undergrowth are visually unappealing to visitors. Healthy, open forests attract visitors and provide a satisfying outdoor experience.

Reducing the Risk and Cost of Catastrophic Fires

The Department of the Interior and the U.S. Forest Service estimate that there are more than 190 million acres of federal forests and rangelands managed by the Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, and the U.S. Forest Service in the lower 48 states that are at risk of catastrophic wildfires. The Forest Service estimates that 50 million acres in the National Forest System alone are at high risk of severe forest fire, with 80 percent of that acreage in the West. Such fires threaten human safety, property, and ecosystem integrity. Drought conditions coupled with years of fuel buildup combine to make these lands

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[12]*E-Mainstream,* American Water Works Association, Vol. 46, Number 4, July/August 2002.

[13]U.S. Environmental Protection Agency, "Emissions and Emission Factors For Forest Wildfires," Table 13.1-2. October 1966.

[14]USDA/Forest Service Website, www.fs.fed.us/recreation

vulnerable to intense, fast-moving fires that often are far more destructive than those in prior years.[15]

More than 8 million acres of forests burned in 2000, the largest number of acres burned in more than four decades. Nearly as many – 7.2 million acres – burned in the 2002 fire season. Many of those fires produced catastrophic results due to the dangerous combination of drought, overgrowth, and disease. Federal agencies spent $1.4 billion in 2000, and again in 2002, to fight fires to protect critical habitat and other resource values. In healthy forests, losses due to fire would not have been nearly as devastating.

In a healthy forest, where heavy undergrowth is scarce and larger trees abound, fires burn close to the ground, consuming grasses, forest litter, and small shrubs. In an unhealthy forest, fires burn intensely due to the large amount of accumulated fuel, often moving up to the crowns of larger trees, assuring their death. Under the right conditions of drought, high winds, and heavy fuel load, these fires can explode and consume large amounts of acreage in a very short time. For example, the Hayman fire in the Pike National Forest in Colorado, which started on June 9, 2002, grew to about 200 acres overnight and then erupted and burned 137,000 acres over the next 21 days, according to the Rocky Mountain News.[16]

Thinning smaller trees, removing dead and dying trees, and removing undergrowth promotes healthy forest growth and reduces the chance that wildfires will grow and spread.

Extremists Form Human Roadblocks to Restoring Forest Health

Despite the long-time recognition of the problem of overgrowth and the availability of proven tools to restore forest health, obstacles remain. Efforts by federal land managers to conduct prescribed burns and mechanical thinning projects to reduce undergrowth and remove smaller trees often are stalled or shut down by appeals or lawsuits filed by environmental groups. Such groups also sue to halt timber sales to salvage downed, diseased, or damaged trees, and seek to prevent even small projects of only several hundred acres to remove smaller trees and undergrowth.

Lawsuits and Threats of Lawsuits Delay Restoration of Forest Health

Forest Service plans and projects can be attacked at almost every stage by administrative appeals and lawsuits under provisions of the National Environmental Policy Act (NEPA).

Existing laws allow environmental groups to attack as "environmentally unsound" small-scale thinning projects as well as large-to-medium size timber sales. Administrative appeals and litigation obviously contribute to the time it takes to plan for, reach a decision on, and then

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[15]USDA/Department of Interior Notice of Proposed Rulemaking, December 16, 2002.

[16] "The Hayman War: The Story of Colorado's Worst Wildfire," *Rocky Mountain News*, June 30, 2002.

implement fuel-reduction projects. The Forest Service estimates that about $250 million per year is spent just on planning for all projects in National Forests, including fuel-reduction projects, an amount representing about 20 percent of the total funding for managing the National Forest System.[17] Delays associated with appeals and litigation consume more time and further add to Forest Service costs. In the interim, forest ecosystems remain at risk to further declines in overall health.

In a report to the House Resources Forest Subcommittee last year, the Forest Service concluded the following:

> "There are three general reasons it takes substantial time to plan for, make decisions on, and begin implementing Forest Service projects (including fuel hazard reduction projects): excessive analysis, ineffective public involvement, and management inefficiencies. **There are a number of factors highlighted by fuel treatment examples, including: management uncertainty surrounding appeals and litigation, changing standards and guidelines, changing court interpretations, and supplementing documents to meet new requirements** [emphasis added]."[18]

The same report concludes that 48 percent of all decisions made in fiscal years 2001 and 2002 for mechanical treatments of hazardous fuel were appealed: The Forest Service made 326 decisions to implement treatments to reduce hazardous fuels on National Forest System lands, all of which were subject to administrative appeal; of those, 155 were appealed, and 21 were litigated. According to the Service, the appeals vary from 11 percent of decisions in the Rocky Mountain Region (Colorado, Kansas, Nebraska, South Dakota and Eastern Wyoming) to 100 percent in the Northern Region (Montana, Northern Idaho, North Dakota and Northwestern South Dakota). In the Southwestern Region (Arizona and New Mexico), 73 percent of the mechanical-treatment decisions were appealed and 13 percent were litigated.[19]

During the week of February 2, 2003, a federal judge issued a temporary stay against a Forest Service project to remove 15,000 roadside trees burned in a fire last summer in Oregon's Malheur National Forest. The Forest Service determined that removal of the trees was necessary for public safety due to the closeness of the trees to a road and that removal would not pose any threat to the environment. The Blue Mountains BioDiversity Project appealed the Forest Service's decision to remove the trees, claiming that the agency failed to use the environmental

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[17] "The Process Predicament – How Statutory, Regulatory and Administrative Factors Affect National Forest Management," USDA/Forest Service, June 2002, p. 36.

[18] "Factors Affecting Timely Mechanical Fuel Treatment Decisions," p. 1, Forest Service House Committee on Resources testimony, July 2002.

[19] "Factors Affecting Timely Mechanical Fuel Treatment Decisions," p. 4.

review process required by law. The judge has halted the project until he can determine whether to cease it permanently.[20]

In Arizona, the Forest Conservation Council of Linden, Virginia and Santa Fe, New Mexico filed a lawsuit to stop salvage activities on about 24,700 acres of land in the Apache Sitgreaves and Tonto National Forests. The suit seeks to overturn three decisions to proceed with the salvage operation in the two National Forests. The Council argues in its suit that the Forest Service is illegally exempting the proposed salvage operations from full environmental review.

There are scores of other examples, but the picture is clear: the laws and procedures must be balanced to ensure necessary environmental reviews without misusing federal rules and procedures to slow down and even stop badly needed projects that are designed to protect and enhance the nation's forests.

The Daschle Solution Steers Around the Roadblocks

In the 107th Congress, a number of bills were introduced to address the forest health problem. All but one were stalled. Only an amendment to a Defense Appropriations bill offered by then Majority Leader Daschle passed. In summary, the Daschle amendment: exempts *all projects listed in his legislation* from any further NEPA requirements, from administrative appeals, from Endangered Species Act (ESA) Section 7 consultation procedures, from review by any court, and from court injunctions. However, Senator Daschle's legislation was limited to about 8,000 acres inside and outside of high-risk areas in South Dakota. Thus, the amendment allows direct salvage logging in the Beaver Park Roadless Areas, and the construction of fuel breaks and thinning within one-quarter of a mile of private property and structures in some areas of the Black Hills National Forest – all unfettered by the roadblocks hindering project implementation and rehabilitation on all other federal lands.

Senator Daschle's amendment removes most of the administrative and judicial obstacles to rehabilitating burned areas and protecting remaining forest resources. His remedies would aid forest health on all other federal lands.

The President's Plan to Promote Healthy Forests

President Bush's healthy forest plan applies some of the same concepts that are embodied in Senator Daschle's legislation, but it does not take the heavy-handed approach of eliminating many of the NEPA processes or appeals of treatment plans, or preventing judicial review of treatment plans. It addresses those areas in need of treatment to restore forest health and those previously subjected to catastrophic wildfires.

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[20]Associated Press article as printed in the *San Francisco Chronicle*, February 12, 2003.

The President's plan, announced in August 2002, directed the Secretary of Agriculture, the Secretary of the Interior, and the Council on Environmental Quality to improve regulatory processes to reduce the risk of catastrophic wildfires. His directives included: improving procedures for implementing fuels-treatment and forest-restoration projects in priority forests and rangelands, in collaboration with local governments; reducing the number of overlapping environmental reviews; developing guidance for weighing the short-term risks against the long-term benefits of fuels-treatment and restoration projects; and ensuring consistent National Environmental Policy Act procedures for these types of projects.

Federal agencies have begun to implement those directives. The Forest Service and the Department of the Interior have proposed new rules revising their procedures for implementing NEPA and Council on Environmental Quality (CEQ) regulations. The new rules are designed to facilitate efficient planning and timely decisions concerning treatment of hazardous fuels and stabilization and rehabilitation of areas. Public comments on the proposal have been received and final regulations are being prepared.

But administrative solutions do not fully address the enormity of the problem, and so the President also committed to work with Congress on legislation to assure forest health. The President seeks legislation to: authorize agencies to enter into long-term stewardship contracts with the private sector, non-profit organizations, and local communities (now authorized by P.L. 108-7); expedite implementation of forest health projects, particularly in high-priority areas; ensure that judges consider long-term risks of harm to people, property, and the environment in challenges based on short-term risks of forest health projects; and remove a 1993 appropriations legislation rider that was designed to assure activists the right to appeal all Forest Service projects.

The President's proposals embody the large-scale, long-term efforts needed to bring all of the nation's forests back to health in a meaningful way. They should be enacted by the 108th Congress as quickly as possible to help prevent catastrophic wildfires in the coming fire season, and in the years to come.

Beyond the President's Plan

Assuring adequate funding for forest health restoration should be a top priority for both the Bush Administration and Congress. Federal agencies have been spending an average of about $400 million each year putting out fires. As mentioned earlier in this paper, in two of the past four years fire suppression expenditures have exceeded $1 billion. Yet federal land management agencies annually are appropriated only about $650 million for the removal of overgrowth, thinning of trees and other projects that restore the health of our forests and prevent and mitigate the effects of wildfires.